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AMENDMENTS TO THE CLAIMS

12 Claim 1 (Currently amended) A method to prill a shear-thinnable mixture comprising the steps of:

- a) providing a molten first component;
- 25 b) mixing at least a second component with said molten first component;
- c) reacting said components at a temperature and for a time sufficient to form a shear-thinnable mixture;
- d) mechanically agitating said shear-thinnable mixture at a
30 rotational speed of at least greater than about 200 revolutions per minute by means of an agitator in a prill head, wherein essentially the entire liquid volume in said prill head is swept by an said agitator to shear thin said shear-thinnable mixture; and
- e) permitting said shear-thinned mixture to flow through holes in
35 said prill head under the influence of a force selected from the group consisting of static pressure and centrifugal force.

Claim 2 (Original) The method according to claim 1 wherein said shear-thinnable mixture is a melt slurry.

40 Claim 3 (Original) The method according to claim 1 wherein said first component is ammonium nitrate and said second component is ammonium sulfate.

Claim 4 (Original) The method according to claim 1 wherein said shear-thinnable mixture comprises no more than about 2 weight percent water.

Claim 5 (Original) The method according to claim 3 wherein said shear-thinnable mixture further comprises micronutrients.

45 Claim 6 (Original) The method according to claim 1 wherein said prill head is one of a rotating bucket with a stationary blade, a stationary bucket with rotating scrapers and blades, and an agitated pressurized nozzle assembly.

Claim 7 (Currently amended) ~~A method to prill a shear-thinnable mixture through small prill holes comprising the steps of:~~

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- 50 a) ~~providing a molten first component;~~
b) ~~mixing at least a second component with said molten first component;~~
c) ~~reacting said components at a temperature and for a time sufficient to form a shear-thinnable mixture;~~
55 d) ~~mechanically agitating said shear-thinnable mixture at a rotational speed of at least 200 revolutions per minute in a prill head wherein essentially the entire liquid volume in said prill head is swept by an agitator to shear thin said shear-thinnable mixture;~~
60 e) ~~wiping the surface of said prill head with surface-wiping blades; and~~
f) ~~permitting said shear-thinned mixture to flow through small holes in said prill head under the influence of a force selected from the group consisting of static pressure or centrifugal force.~~

65 The method according to claim 1 wherein said prill head is wiped with surface-wiping blades.

Claim 8 (Original) The method according to claim 7 wherein said first component is ammonium nitrate and said second component is ammonium sulfate.

70 Claim 9 (Original) The method according to claim 7 wherein said shear-thinnable mixture comprises no more than about 2 weight percent water.

Claim 10 (Original) The method according to claim 7 wherein said shear-thinnable mixture further comprises micronutrients.

Claims 11 to 13 (Withdrawn)

Claim 14 (Cancelled)

75 Claim 15 (Previously added) The prilling method according to either claim 3 or claim 8, wherein the reaction time is about 10 minutes to about 15 minutes.

Claim 16 (Previously added) The prilling method according to either claim 3 or claim 8, wherein the reaction temperature is at least about 180°C to about 200°C.

32 Claim 17 (Previously added) The prilling method according to either claim 3 or claim 8, wherein the ammonium nitrate and the ammonium sulfate are present in equimolar amounts.
